REMARKS/ARGUMENTS

Examiner H. T. Le is thanked for a thorough Search and Examination of the Subject Application for Patent. Examiner Le is also thanked for renumbering incorrectly numbered Claims 13-45 as Claims 12-44 respectively.

Examiner Le has renumbered incorrectly numbered Claims 13-45 as Claims 12-44 respectively. This correction is shown in the Listing of the Claims by deleting the incorrect number with an overstrike, such as ~~xy~~, or by double brackets, such as [[xy]]. Double brackets are used for any number containing the numeral 4. The corrected numbers of the claims are underlined, such as xy. Any claim for which the only change is the claim number correction is identified as (ORIGINAL). Any amended claims are identified as (CURRENTLY AMENDED). All reference to the Claims in this paper will be according to the renumbering done by Examiner Le.

Claim 1 has been amended to include the limitations of Claims 2 and 3. Claim 10 has been amended to include the limitations of Claims 12 and 13. Claim 22 has been amended to include the limitations of Claims 24 and 25. Claim 36 has been amended to include the limitations of Claims 40 and 41.

Claims 2, 3, 12, 13, 24, 25, 40 and 41 have been cancelled without prejudice.

Claims 23 and 26-35 have been amended to depend from Claim 22 because of the renumbering of Claims 12-44. Claims 37-39 and 42-44 have been amended to depend from Claim 36 because of the renumbering of Claims 12-44.

Reconsideration of the Rejection of Claim 1 under 35 U.S.C. 102(e) as being anticipated by Solberg, Jr. et al. (U.S. Pat. No. 6,249,261 B1) is requested. Claim 1 describes an antenna comprising a number of antenna elements wherein said antenna elements are formed of conductive loaded resin-based materials, wherein said conductive loaded resin-based materials comprise micron conductive powders or micron conductive fibers; and electrical communication to said antenna elements. Claim 1 is different from Solberg, Jr. et al. for the following reasons.

Solberg, Jr. et al. describe a directional antenna constructed from polymer composite materials which are electrically conductive but which have low radar reflectivity and low radar cross section. The antenna described by Claim 1 is not restricted to be a directional antenna, is not restricted to have low radar reflectivity, and is not restricted to have low radar cross section.

The antenna elements described by Solberg, Jr. et al. are composite round rods fabricated from electrically-conductive fabric and epoxy. It is believed that the antenna elements described by Solberg, Jr. et al. are different from the antenna elements formed of conductive loaded resin-based materials comprising micron conductive powders or micron conductive fibers described in Claim 1. The resin based materials of

Claim 1 are a specific type of polymer chosen for this specific purpose. It is believed that the conductive loaded resin-based materials comprising micron conductive powders or micron conductive fibers are different from the composite round rods fabricated from electrically-conductive fabric and epoxy described by Solberg Jr. et al. The composite materials described by Solberg, Jr. et al. are chosen to be selectively conductive, having high conductivity for direction finding signals and low conductivity of radar energy, see column 4, lines 34-42. The conductive loaded resin-based materials comprising micron conductive powders or micron conductive fibers, described in Claim 1, are chosen to have good conductivity over as wide a range of frequencies as possible.

It is believed that the antenna described by Claim 1 is different from the antenna described by Solberg, Jr. et al. because the antenna described by Claim 1 is not restricted to be a directional antenna, is formed of a material having good conductivity over as wide a range of frequencies as possible, and is formed of conductive loaded resin-based materials wherein said conductive loaded resin-based materials comprise micron conductive powders or micron conductive fibers, all of which are different from the antenna described by Solberg, Jr. et al. Reconsideration of the Rejection of Claim 1 under 35 U.S.C. 102(e) as being anticipated by Solberg, Jr. et al., and allowance of Claim 1, are requested.

Reconsideration of the Rejection of Claims 1-44 under 35 U.S.C. 103(a) as being unpatentable over Burrell et al. (U.S. Pat. No. 5,420,596) in view of Marks et al. (U.S. Pat. No. 5,771,027) is requested. Claims 1-44 describe antennas wherein the

antenna elements are formed of conductive loaded resin-based materials,wherein said conductive loaded resin-based materials comprise micron conductive powders or micron conductive fibers.

As the Examiner has indicated Burrell et al. do not describe antenna elements formed of conductive loaded resin-based materials.

Marks et al. describe a reflecting dish and a method of forming the reflecting dish for a polarizing parabolic dish antenna. The polarizing reflecting dish is formed of composite material having a polarizing grid integrated into the laminated structure of the reflector. The grid is integrated into the structure of the reflector by weaving electrical conductors into the warp of the resin reinforced cloth that is used to form one of the laminate layers of the reflector shell. Typically copper wires are used as the conductors woven into the resin reinforced cloth. Several properly oriented and aligned layers of the resin reinforced cloth, having the copper wires, are used to form the antenna reflector. See column 3, lines 61 to column 4, line 23. The invention described in Claims 1-44 is non-obvious over Burrell et al. in view of Marks et al. for the following reasons.

In the antennas of Claims 1-44 the actual antenna elements are formed of conductive loaded resin-based materials comprising micron conductive powders or micron conductive fibers, while in the invention of Marks et al. the composite material having electrical conductors woven into the warp of resin reinforced cloth is used only to

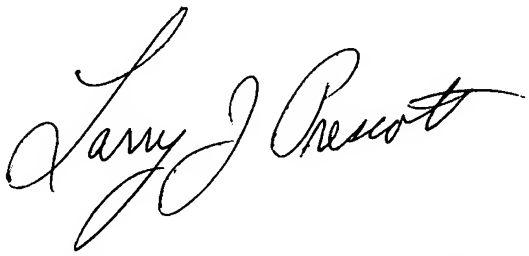
form a reflecting dish in an antenna. The forming of various shaped antenna elements using the material having electrical conductors woven into the warp of resin reinforced cloth is not described by Marks et al.

The antenna material described by Marks et al. comprises electrical conductors woven into the warp of resin reinforced cloth. The antenna materials used by Marks et al. are used to form a polarizing reflector. The antenna elements descried in Claims 1-44 are formed from conductive loaded resin-based materials comprising micron conductive powders or micron conductive fibers, and can be formed into any shape of antenna elements desired. Claims 1-44 do not place restrictions on the shapes of the various antenna elements. In the antenna materials described by Marks et al. the electrical conductors can be "any metallic wire, a graphite tow, or a conductively coated dielectric yarn", see column 6, lines 5-7. The conductive loaded resin-based materials described in Claims 1-44 comprise micron conductive powders or micron conductive fibers which are different from the metallic wire, graphite tow, or conductively coated dielectric yarn described by Marks et al.

It is believed that Marks et al. do not make the antenna elements formed of conductive loaded resin-based materials comprising micron conductive powders or micron conductive fibers an obvious extension of Burrell et al. Reconsideration of the Rejection of Claims 1-44 under 35 U.S.C. 103(a) as being unpatentable over Burrell et al. in view of Marks et al., and allowance of Claims 1-44, are requested.

It is requested that should Examiner H. T. Le not find that the Claims are now Allowable that the Examiner call the undersigned Agent at (845)-462-5363 to overcome any problems preventing allowance.

Respectfully submitted,



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